AIS RAPID RESPONSE PLAN

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MANAGEMENT SUMMARY

Introduction

The waters of Lac du Flambeau are clearly at risk. Several lakes have infestations of Smelt, Purple Loosestrife, or Rusty Crayfish, while other Aquatic Invasive Species (AIS) like Eurasian Water Milfoil and Curly-Leaf Pondweed move closer each year.

There is apprehension that the rapid growth and spread of some aquatic invasive species may significantly harm the local economy, property values, ecosystems and native species, while also threatening human health.

As a result, the Lac du Flambeau Band of Lake Superior Chippewa Indians and the Lac du Flambeau Town Board have been working together to address the threats of AIS. The Town Board created the Town Lakes Committee (TLC) in 2005, empowering volunteers to protect the lakes from AIS, and with help from the Tribal DNR and Wisconsin DNR, dozens of volunteers have participated annually in a variety of prevention and detection activities.

Statement of the Problem

Given the high probability that more AIS will infest a body of water in Lac du Flambeau, it is critical for the Tribe and Town to respond quickly to reports of potential AIS infestations, particularly when most volunteers, local citizens, and lake associations and other water-oriented organizations have had minimal training on identifying AIS and even less on how to respond to infestations.

Recognizing the need to respond quickly to reports of AIS, the Tribe and Town have prepared this *Rapid Response Plan*.

Purpose of the Rapid Response Plan

The *Rapid Response Plan* guides the Tribe and Town on how to respond to new reports of Aquatic Invasive Species in a timely manner.

Area Covered by the Rapid Response Plan

The *Rapid Response Plan* pertains to all waters within Reservation and Town boundaries, including all lakes, rivers, streams, wetlands and other water conveyances. The Tribe's focus is on **all waters within the Reservation boundaries,** while the TLC's focus is on **all lakes within the Town's boundaries**.

Participants

The *Rapid Response Plan* requires the interaction and cooperation of several individuals and organizations. The lead participants include the Lac du Flambeau Band of Lake Superior Chippewa Indians Water Resource Program (Tribe) and the Town of Lac du Flambeau Town Lakes Committee (TLC).

Other participants include the Wisconsin Department of Natural Resources (WDNR), the United States Environmental Protection Agency (EPA), and the United States Natural Resource Conservation Service (NRCS).

Depending on the water body and circumstances, the Invasive Species Coordinators for Vilas County and Oneida County and representatives from the Great Lakes Indian Fish and Wildlife Commission (GLIFWC), local lake associations and other organizations may participate in the process.

Aquatic Invasive Species Covered by the Plan

The *Rapid Response Plan* pertains to new detections of Aquatic Invasive Species that may cause the greatest damage to the local economy and environment or that threaten human health.

Examples of plant invasive species of primary concern include Curly Leaf Pond Weed, Eurasian Water Milfoil, Purple Loosestrife, European Frogbit, Hydrilla, Water Chestnut, and Flowering Rush.

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Examples of animal invasive species of primary concern include the Zebra Mussel, Spiny Water Flea, Rusty Crayfish, Ruffie, Round Goby, Asian Carp, White Perch, and Rainbow Smelt.

Evaluation of the Rapid Response Plan

The TLC and Tribe will review and evaluate the *Rapid Response Plan* annually.

THE PROCESS

Phase #1 – Detection & Verification

1) Anyone who finds an aquatic plant or animal that seems out of the ordinary or that resembles an Aquatic Invasive Species should record the location of the find and report the finding immediately to the Tribal DNR (715-588-3303), the Town Hall (715-588-3358), or any of the Lake Stewards (See attached list). If possible, a sample should be submitted.

2) When a report is received, representatives of the Tribal DNR, TLC, or a Lake Steward determine whether the report is of a plant/animal of concern and whether a known population already exists in the area of the find.

The process ends at this point, **IF**

a) the suspect plant/animal already exists in the area of the find, **OR**,
b) the suspect plant/animal is not an Aquatic Invasive Species of concern.

The report is shared with both the Tribe and TLC and the process continues to step 3, **IF**

c) the suspect plant/animal is an Aquatic Invasive Species of concern, **AND**
d) this is the first report of the AIS in that area.

3) Representatives of the Tribal DNR and TLC

a) invite appropriate agencies and individuals to a meeting to learn about the situation and establish a Management Team,
b) authorize a survey of the location to confirm the presence of the AIS and to determine the extent of the infestation, and
c) initiate Phase #2 of the process.

Phase #2 – Conduct Rapid Assessment

When new AIS of concern are verified, the Management Team conducts a rapid assessment to determine potential threats to the economy, environment, and human health. The assessment includes a review of the biology of the plant/animal, the location of the find, and other relevant research, literature, and local factors.

If the AIS is about to produce a new generation, such as a weed in flower, or if it is in one of the navigable chains of lakes or water bodies upstream, the Tribe and Town may act immediately and then complete the remaining phases of the process later.

Phase #3 – Develop Management Plans

Decisions are made whether to write *Level I and Level II Management Plans.* A Level I Management Plan focuses on the short term, detailing everything to be done as soon as practicable in response to the new infestation: who will do what, when, how, affects, and with what resources and limitations. A Level II Management Plan addresses similar issues, but projects goals, affects, activities and costs over the next several years. Management Plans must be consistent with available resources, the Law, including Tribal Law, and Tribal and Town Policy.

Phase #4 – Implement Management Plans

Management Plans are implemented after being endorsed by the Tribe and Town Board.

COMPLETE TEXT

Introduction

There has been a growing awareness that introduced invasive species are having significant and increasing impacts on the economy, ecosystems, native species, and pose increasing threats to human health. Increased trade and travel have created many new pathways for the spread of exotic species and have significantly increased the threat of new and recurring biological invasions. Also the changing landscape has given these invaders a chance to get a foothold in the disturbed environment where native plants once thrived. While the majority of introduced species are not harmful to the economy or the environment, a small percentage of them are very damaging and need to be detected as soon as possible.

Even the best prevention efforts cannot stop all introductions of AIS. Early detection and quick coordinated responses are needed to manage or contain invasive species before they become too widespread and control becomes technically and/or financially impossible. Populations that are not addressed early may require costly ongoing control efforts. Without a coordinated system for early detection and rapid response which are integrated with general vegetation surveys, free living exotic plants and animals will continue to incubate, take over and cause problems.

There are actually hundreds of nonnative species in our region. New invasive species are constantly arriving, so it is important to stay informed and educated about what new invasive species are currently moving in. The ones of greatest concern are the ones we consider the most aggressive and invasive, the same ones that have the biggest effects on native ecosystems.

Each invasive species has its own destructive effects on our ecosystems. Some can affect recreational and substance-gathering opportunities like boating, swimming, hunting, fishing, or riceing. Aquatic Invasive Species can clog pipes and contaminate water supplies, making it difficult for some industries and agriculture. Invasive species can destroy habitat for fish, waterfowl or other wildlife by changing the food source or shelter that these creatures have learned to depend on. Aquatic invasive species threaten to severely alter the Northwoods ecosystems we are accustomed to.

Approach

The objective of the Rapid Response Plan is to guide the Tribe and Town on how to respond to new reports of Aquatic Invasive Species in a timely manner, develop and agree upon a coordinated rapid response to aquatic invasive species to minimize impacts to the economy and ecology of the area. Identifying partnerships, contacts, species of concern, management and funding responsibilities, and avenues for information distribution is the first step in organizing an effective response. Development of a response procedure that includes detection, verified identification, assessment of management options, funding

requirements, treatment procedure, treatment, post management, post monitoring, re-treatment, and notification is critical to accurate fast response and control of the species.

Overview

This rapid response plan will cover all waters within Reservation and Town boundaries, including all lakes, rivers, streams, wetlands and other water conveyances. The Tribe's focus is on all waters within the Reservation boundaries while the TLC's focus is on all lakes within the Town's boundaries. Lakes, Rivers, Streams, Wetlands and other water conveyances are areas of concern. Identification of aquatic invasive species in water bodies connected by navigable channels, and up stream water bodies connected by surface water are priority areas for rapid response. Aquatic invasive species known to cause significant ecological or economical impacts will be priority species for rapid response.

The lakes connected by navigable channels include Pokegama, Long Interlaken, Moss, To To Tom, Crawling Stone, Little Crawling Stone, Flambeau, Fence, North Placid, and South Placid Lakes. These lakes are commonly referred to as the Flambeau Chain of Lakes (covering approximately 8000 acres). They flow out the Bear River. To the north, up stream from the Flambeau Chain, but not navigable, in order of occurrence are White Sand, Sunfish, Big Crooked, and Ike Walton Lakes. Other navigable chains on the reservation are Upper, Lower, and Middle Sugarbush Lakes and Gunlock and Shishebogama Lakes. The Trout River flows north into Wild Rice Lake, which is a headwater lake to the Manitowish Chain (off reservation). The Tomahawk River flows south though a small portion of the southeast corner of the Reservation into the Willow Flowage (off reservation).

The priority species are aquatic species that cause the greatest damage to the economy or environment and the species that can be effectively managed or removed with control methods. Plant invasive species like Curly Leaf Pond Weed, Eurasian Water Milfoil, or Purple Loosestrife are rapidly growing and will out compete native vegetation, and interfere with water recreational activities and wildlife. These plant species are the most important to identify early because with quick action the plants can be controlled. If the plants are not identified early they can become well established and almost impossible to control in a cost effective manner. Animal and fish invasive species like the Zebra Mussel, Spiny Water Flea, Ruffie, Goby, Asian Carp, and Rainbow Smelt are harder to control even after early identification. Animal species are harder to control due to their mobility and dispersion. New developments in electric and other barriers have helped to reduce the spread of some fish species into connected waters.

A rapid response procedure will improve the ability of a coordinated effective control of aquatic invasive species. Once identification of a species is verified, a clear path is laid out to understand the best method of control. This path starts with an assessment of the species location, type, and ability and speed of spread. This information will be synthesized into a report along with information on funding requirements, treatment procedure, post management, post monitoring, re-treatment, and notification to be used in the implementation phase.

Partnerships

Partnerships and a coordinated response are critical for effective response and control. This section will describe partners and contacts with information on who should be contacted and when. The Lac du Flambeau Band of Lake Superior Chippewa Indians Water Resource Program (Tribe) and the Town of Lac du Flambeau Town Lakes Committee will be the lead partners in protecting waters from AIS within the intersection between the Town and the Reservation. Other partners will include Vilas County, Great Lake Indian Fish and Wildlife Commission (GLIFWC), Wisconsin Department of Natural Resources (WDNR), US Environmental Protection Agency (EPA), and The US Natural Resource Conservation Service (NRCS).

The Tribe and the Town will work together for monitoring/early detection, specimen identification/vouchering, specimen verification, recording information, developing the action plan, seeking funding for action plan, applying for permits, approving the plan, carrying out the plan, and future monitoring and assessment. The Tribe and Town will utilize Vilas County, GLIFWC, WDNR, EPA, and NRCS for technical and funding assistance.

Depending on the water body and the circumstances, the Invasive Species Coordinators for Vilas County and Oneida County, local lake associations and other organizations may participate in the process.

Contacts	**Activity**
Tribal Water Resource Program Gretchen Watkins Water Resource Specialist/Hydrologist (715) 588-3303 ex: 5316 John Brown Water Resource Technician (715) 588-4238 Terry “Fred” Allen Water Resource Technician (715) 588- 5258 Located at the Tribal Fish Hatchery on Long Point Lane off of Hwy 47 north of the Casino. Hours of operation Monday – Friday 7am-3:30pm.	Monitoring Specimen verification Data recording Development of the action plan Seek funding for rapid response Permits Plan carryout Informing the public

Lac du Flambeau Town Hall (715) 588-3358 Title: Chair, Town Lakes Committee	Monitoring Data recording Development of the rapid response plan Seek funding for rapid response Permits Plan carryout Informing the public
Vilas County Ted Ritter Invasive Species Coordinator (715) 479-3738 330 Court Street Eagle River, WI 54521 **Oneida County** Jennifer Holman Aquatic Invasive Species Coordinator 715-369-7836 PO Box 400 Rhinelander, WI 54501	Development of the rapid response plan Funding for rapid response
GLIFWC Dara Olson Aquatic Invasive Species Project Coordinator 715 682-6619 ex 129 100 Maple St. Odanah, WI 54861	Data recording
WDNR Kevin Gauthier Sr. Lake Coordinator (715) 365-8937 107 Sutliff Avenue Rhinelander, WI 54501	Monitoring Specimen verification Data recording Funding for rapid response
EPA http://www.epa.gov/owow/invasive_species/	Funding for rapid response
NRCS Julie Malvitz District Conservationist Phone: (715) 362-5941 ex:111 Service Center 2187 North Stevens Street, Suite A Rhinelander, WI 54501-3879	Funding for rapid response

THE PROCESS

Phase 1 - Early Detection, Specimen Identification and Vouchering

Early detection and proper identification of species is critical when responding to new invasions of species of concern. It is important to know who to contact when a suspect species is found to verify the species and determine if it is a new population. Lakefront homeowners, lake monitors, boat inspectors, recreationists, and many other lake users might find a suspect species in a variety of locations and should contact an amateur identifier. Amateur identifiers like lake association appointees, Town Lakes Committee members, Tribal Water Technicians, and boat inspectors should be able to make a determination if verification is needed by a professional identifier (see communication network)

The Town Lakes Committee and the Tribal Natural Resource Department program will be conducting regular monitoring activities of Lac du Flambeau waters. Boat inspectors should also be monitoring boat landings and the organisms attached to the boat as they are removed from the water. Any suspect species should be placed in a zip lock bag and labeled with the collector's name and phone number, water body, location found (preferably marked on a map), time, and date and then delivered to amateur or professional for identification. A list of amateur people to make the initial identification will be developed by the Town Lakes Committee. The identifier should check the map of known populations of AIS to determine if the species was found in a location populated with AIS. If the initial identification by an amateur is questionable or positive for a species of concern the Tribal Water Resource Program or the WDNR should be contacted for professional identification and voucher the species for final verification. If there is a positive identification for an AIS, then the location were the species was found should be surveyed to confirm and map the location and extent of the infestation.

The Tribe and Town Lakes Committee will develop brochures, fact sheets, and maps needed to assist local agencies in communicating with the public about the early detection procedure.

Phase 2 - Rapid Assessment

Once an organism has been identified and then verified as a species of concern, a rapid assessment will be undertaken to determine its potential threat to different habitats and its ability to spread. The goal is to quickly determine the level of risk the invasion poses for Lac du Flambeau. Information useful for making this determination includes: biology of the organism, its distribution, its concern status, mitigation options, and the window of opportunity for action. If the organism is about to produce a new generation, e.g. a weed in flower, it may be necessary to act without complete information.

The first step will be to conduct ecological assessments to determine the potential spread and harm of the verified species in Lac du Flambeau. If the species is known to be one of the listed species of concern (Eurasian Watermilfoil, Curly Leaf Pondweed, European

Frogbit, Hydrilla, Water Chestnut, Purple Loosestrife, Flowering Rush, Zebra Mussels, Spiny Water Flea, Rusty Crayfish, Ruff, Round Goby, Asian Carp, White Perch and Rainbow Smelt) and could have a significant ecological effect in Lac du Flambeau then the next step is to determine how likely it is to spread and to what extent. If the species is found in one of the navigable chains of lakes or water body upstream and connected by surface water, as mentioned above, a rapid control treatment is a priority. If the species is found in an isolated lake, notification is the priority and control treatment is secondary. Upon identification of an invasive aquatic plant a plant survey of the whole community will be completed.

Phase #3 - Rapid Response Plan Development

When the new biological invasion is discovered it will trigger an orderly process to determine whether or not action should be taken to manage the population. Details of the process will vary depending on the type of organism, its distribution, population size, biology, concern status, available mitigation options, etc. This plan should incorporate funding, who will be taking the action, permits required and who will be responsible for monitoring after the action has taken place. The management plan will recommend short-term and long-term management actions.

Phase #4 - Management Plan Implementation

Once an assessment has been completed, and action is recommended, impacted landowners and appropriate public officials will be organized to mount an on-the-ground campaign against the invader. Early Warning and Rapid Response communication networks need to be developed with the Town, Tribe, lakes associations, guides, and boat landing monitors. Rapid response is where action is taken quickly to contain and deny reproduction. There are three different types of management/control of AIS, they are Chemical, Mechanical/Physical, and Biological.

Chemical methods involve the application of chemicals to manage and/or control AIS. Mechanical and physical methods involve the management and/or control of AIS by hand or machine or the alteration of the physical environment. Examples of mechanical and physical rapid response and control actions for invasive plants include manual cutting or picking, mowing, dredging, and shading to prevent photosynthesis. Examples of mechanical and physical rapid response and control actions for invasive animals include netting or trapping, smothering and changing ambient water temperature. Biological methods involve the introduction of parasites, predators or pathogens to the environment to control AIS. Biological methods are not generally considered rapid response methods because they typically take considerable time to develop and achieve results and they generally reduce, rather than manage, target populations. The three types of manage and control methods are not mutually exclusive because sometimes they can be used in combination and because some actions might belong to multiple categories. For example, the application of a saline solution to water bodies to management or control AIS could be considered both a chemical and a physical action.

Each species has a specific response that will work best for management of the species. The least invasive method should be chosen so that native species are not disturbed. If disturbance is kept to a minimum the better the chance the control method is successful. Plants are normally fixed to the ground or a substrate and localized control methods can be implemented to remove the species. On the other hand animals are quite mobile so control is much more difficult.

By checking for AIS regularly, small populations, when found, may be controlled by using the least invasive method available before the spread is extensive. Small populations of verified invasive plants can be hand pulled or vacuumed. It is imperative that all fragments be removed from the water and the shore. Other more invasive methods of control like screening and chemical treatment require a WI DNR permit and Tribal approval.

Federal permits required for chemical and physical/mechanized treatment

Under the Clean Water Act Section 404 Federal permits might be required for mechanical/ physical control methods, such as the mechanized clearing of riparian areas to remove AIS or dumping of fill material to smother AIS. The US EPA and USACE have issued a rule stating that they regard the use of mechanized earth-moving equipment to conduct activities in waters of the United States (e.g. land clearing, ditching, canalization, and in-stream mining) as regulated discharge of dredged or fill material under Section 404 unless project-specific evidence shows otherwise.

USACE regulatory program management and administration is focused at the District office level, with policy oversight at higher levels. District Engineers are authorized to issue permits, including standard permits, letters of permission, and regional general permits. Division Engineers may also issue permits under certain circumstances. USACE also issues nationwide permits that authorize certain activities that result in minimal adverse environmental effects. Therefore, the appropriate USACE District office will be consulted when planning AIS rapid response or control actions to determine if these actions require a Federal Section 404 permit.

EPA in January 2005 stated that the application of a pesticide to waters of the United States consistent with all relevant requirements under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) does not constitute the discharge of a pollutant (and consequently does not require a Federal NPDES permit) in the following circumstances: the application of pesticides directly to waters of the United States to control pests.

EPA notes that the application of a pesticide in violation of FIFRA is not covered by the interpretive statement, and the applicator is subject to enforcement actions under any and all appropriate authorities including, but not limited to, FIFRA and CWA. EPA has proposed incorporating the 2005 interpretive statement into regulations. Further information can be found at 70 Fed. Reg. 5093 (February 1, 2005) *www.epa.gov/fedrgstr EPA-PEST/2005/February/Day-01/p1868.htm*.